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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/729,535	12/05/2003	Jang Hyeon-Yong	1190860-991330	1908

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EXAMINER

VU, DAVID HUNG

ART UNIT PAPER NUMBER

2828

DATE MAILED: 11/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/729,535

Applicant(s)

HYEON-YONG, JANG

Examiner

David Vu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14-22 is/are allowed.
- 6) ☒ Claim(s) 1-5,7,12,13,23-25,27 and 28 is/are rejected.
- 7) ☒ Claim(s) 6,8-11,26 and 29-32 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Specification

1. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

2. Claim 5 is objected to because of the following informalities: "the signal detector" should properly be ---a signal detector--- since there is no signal detector recited earlier.
3. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-5, 7, 12-13, 23, and 27-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Noma et al (hereinafter Noma), U.S. Pat No 6,184,631.

Noma discloses the claimed invention including a light emitting device 7 which is a cold cathode lamp in a liquid crystal display apparatus inherently having a display panel and electric field generating electrodes; a voltage supply coupled to the light emitting device for making a current flow through the light emitting device; an electrically conductive device 9 positioned a predetermined distance away from the light emitting device for generating a voltage in response to the current flowing through the light

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emitting device; and a status determining device 32-33 for determining the status of the light emitting device based on the voltage from the electrically conductive device, see, for example, abstract, column 1, lines 1-15, column 2, lines 15+, column 3, column 14, lines 45-56, column 18, lines 1-21, claim 11, figures 9 and 13.

Regarding claims 2-4, 7, 28, the status determining device comprises a shut off device for stopping the current from flowing through the light emitting device if the voltage fulfills a predefined condition. The predefined condition comprises the voltage being in a predefined range. The predefined condition indicates that the light emitting device is operating abnormally. The voltage having a level below a threshold value indicates that the light emitting device is operating abnormally.

Regarding claim 5, "rectifier circuit" 27b, R11 having a first node and a second node, wherein the first node is connected to the electrically conductive device 9 and the second node is connected to a "signal detector" 27a, R27.

Regarding claim 12, the light emitting device 7 is a cold cathode fluorescent lamp.

Regarding claim 13, the light emitting device switches on and off periodically at a predetermined on/off duty ratio.

Regarding claim 23, the claimed method is inherent in the Noma reference.

6. Claims 1-5, 7, 12-13, 23, and 27-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakanishi et al (hereinafter Nakanishi), U.S. Pat No 6,407,480.

Nakanishi discloses the claimed invention including a light emitting device 203 which is a cold cathode lamp in a liquid crystal display apparatus inherently having a display panel and electric field generating electrodes; a voltage supply coupled to the

light emitting device for making a current flow through the light emitting device; an electrically conductive device 219 positioned a predetermined distance away from the light emitting device for generating a voltage in response to the current flowing through the light emitting device; and a status determining device 226 for determining the status of the light emitting device based on the voltage from the electrically conductive device, see, for example, abstract, column 4, lines 32+, columns 5-12, column 21, lines 35-43, column 56, lines 24+, column 57, column 58, lines 1-17, figure 52.

Regarding claims 2-4, 7, 28, the status determining device comprises a shut off device for stopping the current from flowing through the light emitting device if the voltage fulfills a predefined condition. The predefined condition comprises the voltage being in a predefined range. The predefined condition indicates that the light emitting device is operating abnormally. The voltage having a level below a threshold value indicates that the light emitting device is operating abnormally.

Regarding claim 5, "rectifier circuit" 251C, 251D having a first node and a second node, wherein the first node is connected to the electrically conductive device 219 and the second node is connected to a "signal detector" 251A, 251B.

Regarding claim 12, the light emitting device 203 is a cold cathode fluorescent lamp.

Regarding claim 13, the light emitting device switches on and off periodically at a predetermined on/off duty ratio.

Regarding claim 23, the claimed method is inherent in the Nakanishi reference.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noma in view of Kouno et al (hereinafter Kouno), U.S. Pat No 6,075,325.

Noma, as discussed from the above, essentially discloses the claimed invention but fails to explicitly disclose a plurality of light emitting devices. Kouno discloses a plurality of cold cathode lamps 3 (figure 1). It would have been obvious to one having ordinary skill in the art at the time of applicant's claimed invention was made to have provided the Noma reference with a plurality of lamps; thus, more light energy would have been generated.

Regarding claim 25, since the claim language is broad, the combination of Noma and Kouno inherently discloses a method in which the "error prevention signal" (signal coming out from rectifier 9) is generated if any of the light emitting devices is in a normal inactive state; and the "error prevention signal" is used for the determining of whether any of the light emitting devices is in an abnormal operational state.

9. Claims 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakanishi in view of Kouno et al (hereinafter Kouno), U.S. Pat No 6,075,325.

Nakanishi, as discussed from the above, essentially discloses the claimed invention but fails to explicitly disclose a plurality of light emitting devices. Kouno

discloses a plurality of cold cathode lamps 3 (figure 1). It would have been obvious to one having ordinary skill in the art at the time of applicant's claimed invention was made to have provided the Nakanishi reference with a plurality of lamps; thus, more light energy would have been generated.

Regarding claim 25, since the claim language is broad, the combination of Nakanishi and Kouno inherently discloses a method in which the "error prevention signal" (signal coming out from 219,251) is generated if any of the light emitting devices is in a normal inactive state; and the "error prevention signal" is used for the determining of whether any of the light emitting devices is in an abnormal operational state.

Allowable Subject Matter

10. Claims 6, 8-11, 26, 29-32 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. Claims 14-22 are allowed.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The patent by Chou is cited as showing a multi lighting loads in an LCD system.

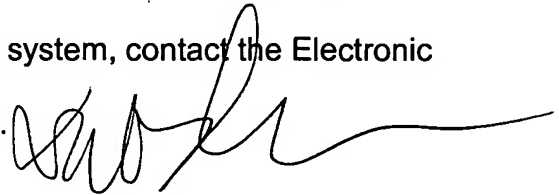
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Vu whose telephone number is (571) 272-1831.

The examiner can normally be reached on M-F 8am-430pm.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David Vu
Primary Examiner
Art Unit 2828

dv